

PRL PC-UV2-D(f1)

Polycarbonate
Polymer Resources Ltd.

Message:

PRL PC-UV2-D(f1) is a Polycarbonate (PC) product. It can be processed by injection molding and is available in North America. Typical application: Outdoor Applications.

Characteristics include:

- Flame Rated
- RoHS Compliant
- Good UV Resistance
- Heat Resistant
- Impact Resistant

General Information			
UL YellowCard	E113219-219251	E113219-101708537	
Additive	UV Stabilizer		
Features	General Purpose		
	Good UV Resistance		
	Medium Flow		
	Medium Heat Resistance		
	Self Extinguishing		
	Ultra High Impact Resistance		
RoHS Compliance	RoHS Compliant		
UL File Number	E113219		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	9.0 to 16	g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.18 mm)	0.50 to 0.70	%	ASTM D955
Outdoor Suitability	f1		UL 746C
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
M-Scale	70		
R-Scale	118		
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			ASTM D638
Yield, 3.18 mm	62.1	MPa	
Break, 3.18 mm	68.9	MPa	
Tensile Elongation			ASTM D638
Yield, 3.18 mm	6.5	%	

Break, 3.18 mm	140	%	
Flexural Modulus (3.18 mm)	2310	MPa	ASTM D790
Flexural Strength (3.18 mm)	95.8	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C, 3.18 mm)	800	J/m	ASTM D256
Gardner Impact (3.18 mm)	> 36.2	J	ASTM D3029
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 3.18 mm	135	°C	
1.8 MPa, Unannealed, 3.18 mm	129	°C	
Vicat Softening Temperature	152	°C	ASTM D1525 ¹
RTI Elec			UL 746
0.750 mm	80.0	°C	
1.50 mm	120	°C	
3.00 mm	120	°C	
RTI Imp			UL 746
0.750 mm	80.0	°C	
1.50 mm	105	°C	
3.00 mm	110	°C	
RTI Str			UL 746
0.750 mm	80.0	°C	
1.50 mm	120	°C	
3.00 mm	120	°C	
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+15	ohms · cm	ASTM D257
Dielectric Strength (0.750 mm)	12	kV/mm	ASTM D149
Arc Resistance (0.750 mm)	PLC 5		ASTM D495
Comparative Tracking Index (CTI) (0.750 mm)	PLC 3		UL 746
High Amp Arc Ignition (HAI)			UL 746
1.50 mm	PLC 0		
3.00 mm	PLC 0		
High Voltage Arc Tracking Rate (HVTR) (0.750 mm)	PLC 2		UL 746
Hot-wire Ignition (HWI)			UL 746
1.50 mm	PLC 2		
3.00 mm	PLC 2		
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.749 mm, ALL	V-2		
1.50 mm, ALL	V-2		
3.00 mm, ALL	V-2		
Optical	Nominal Value	Unit	Test Method

Transmittance (2540 μm)	88.0	%	ASTM D1003
Haze (2540 μm)	1.0	%	ASTM D1003
Injection	Nominal Value	Unit	
Drying Temperature	118 to 124	°C	
Drying Time	3.0 to 4.0	hr	
Drying Time, Maximum	8.0	hr	
Rear Temperature	271 to 293	°C	
Middle Temperature	282 to 304	°C	
Front Temperature	293 to 316	°C	
Processing (Melt) Temp	288 to 316	°C	
Mold Temperature	71.1 to 93.3	°C	
NOTE			

1. Rate B (120°C/h), Loading 2 (50 N)

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

